

Patent Claims

What is claimed is:

1. A trigger actuated liquid sprayer, comprising a pump body, a discharge nozzle mounted on a forward end of said body for manual rotation about a central axis thereof between discharge open and closed positions, a trigger lever movably mounted to said body for operating a pumping mechanism upon actuation thereof, a trigger cover mounted on said sprayer and overlying a front face of said trigger lever in a first position for immobilizing trigger lever actuation, said trigger cover being rotatable to a second position from said first position for exposing said front face for facilitating a grasp of said trigger lever for manual actuation thereof for operating said pumping mechanism, and said trigger cover being latched with said trigger lever in said first position to prevent rotation of said trigger cover from said first position to thereby render the sprayer child-resistant.
2. A sprayer according to claim 1, wherein said trigger cover further includes an integrally formed cap mounted on said nozzle to enable simultaneous rotation of said nozzle therewith.
3. A sprayer according to claim 1, wherein said trigger cover includes at least one protrusion structured to discourage children from squeezing said trigger cover.
4. A sprayer according to claim 1, wherein said trigger lever includes a trigger tab integrally formed on an underside thereof, said tab being engageable with a latch on said trigger cover to lock said trigger cover in said first position.
5. A sprayer according to claim 4, wherein said trigger tab is deflectable upwards to allow unlocking of said trigger cover from said first position, said upwards deflection is limited by a trigger tab stop integrally formed on said underside of said trigger lever.

6. A sprayer according to claim 5, wherein said latch includes a detent engaged with a side of said trigger tab for preventing rotation of said trigger cover from said first position.
7. A sprayer according to claim 6, wherein said detent includes a slanted wall for enabling upwards deflection of said trigger tab when said trigger cover is rotated from said second to said first position.
8. A sprayer according to claim 2, wherein said sprayer includes a shroud having a locking tab engageable with a notch in said cap to prevent rotation of said trigger cover from said first position.
9. A sprayer according to claim 8, wherein said locking tab is resilient for enabling downward deflection thereof for disengagement from said notch to allow rotation of said trigger cover to said second position.
10. A sprayer according to claim 1, wherein said trigger cover is rotatable about said central axis.
11. A method of operating a child-resistant trigger actuated liquid sprayer, said sprayer having a pump body, a discharge nozzle mounted on a forward end of said body for manual rotation about a central axis thereof between discharge open and closed positions, a trigger lever movably mounted to said body for operating a pumping mechanism upon actuation thereof, said method comprising providing a trigger cover mounted on said sprayer and overlying a front face of said trigger lever in a first position for immobilizing trigger lever actuation, latching said trigger cover with said trigger lever in said first position to prevent rotation of said trigger cover from said first position, unlatching said trigger cover from said trigger lever, and rotating said trigger cover to a second position from said first position for exposing said front face for facilitating a grasp of said trigger lever for manual actuation thereof for operating said pumping mechanism.

12. A method according to claim 11, further comprising providing said trigger cover with an integrally formed cap mounted on said nozzle to enable simultaneous rotation of said nozzle therewith.
13. A method according to claim 11, further comprising providing said trigger cover with at least one protrusion structured to discourage children from squeezing said trigger cover.
14. A method according to claim 11, further comprising providing said trigger lever with a trigger tab integrally formed on an underside thereof, said tab being engageable with a latch on said trigger cover to lock said trigger cover in said first position.
15. A method according to claim 14, further comprising deflecting said trigger tab upwards to effectuate unlocking of said trigger cover from said first position, said upwards deflection being limited by a trigger tab stop integrally formed on said underside of said trigger lever.
16. A method according to claim 15, further comprising engaging a detent provided on said latch with a side of said trigger tab for preventing rotation of said trigger cover from said first position.
17. A method according to claim 16, wherein said detent includes a slanted wall for enabling upwards deflection of said trigger tab when said trigger cover is rotated from said second to said first position.
18. A method according to claim 12, further comprising providing said sprayer with a shroud having a locking tab engageable with a notch in said cap to prevent rotation of said trigger cover from said first position.

19. A method according to claim 18, further comprising deflecting said locking tab downwards to disengage said tab from said notch to allow rotation of said trigger cover to said second position.
20. A method according to claim 11, wherein said trigger cover is rotatable about said central axis.